

**ADOPTED REGULATION
OF THE STATE ENGINEER**

LCB File No. R009-06

§§ 1-46 and 48 effective June 1, 2006
§47 effective July 1, 2008

EXPLANATION – Matter in *italics* is new; matter in brackets [~~omitted material~~] is material to be omitted.

AUTHORITY: §§1-3, 5, 6, 8-10, 13-15, 17-46 and 48, NRS 534.020 and 534.110; §§4, 7, 11, 12, 16 and 47, NRS 534.020, 534.110 and 534.140.

A REGULATION relating to wells; establishing a system of demerit points for licensed well drillers who violate certain provisions relating to underground water and wells; establishing certain requirements and procedures for renewal of a well-drilling license; establishing continuing education requirements for well drillers; establishing procedures for obtaining a waiver from the State Engineer from the requirement that an abandoned well be plugged; making various other changes concerning licenses to drill wells, duties of well drillers, and the drilling, construction and plugging of wells and boreholes; and providing other matters properly relating thereto.

Section 1. Chapter 534 of NAC is hereby amended by adding thereto the provisions set forth as sections 2 to 8, inclusive, of this regulation.

Sec. 2. *“Well drilling” and “drilling a well” have the meaning ascribed to them in NRS 534.0175.*

Sec. 3. 1. *The Division shall assess demerit points against the license of a licensed well driller who is found by the State Engineer to have violated any provision of this chapter or chapter 534 of NRS pursuant to the following table:*

Classification of Violations

Maximum

Demerits

Notice of Intent/Approval

<i>Failing to submit a notice of intent to drill to the Division as required by NAC 534.320</i>	<i>25</i>
<i>Failing to notify the Division or obtain approval from the Division as required by NAC 534.370 if drilling is suspended or drilling equipment is moved from the drilling site before a well is completed or plugged</i>	<i>75</i>

Log or Record of Work of Well Driller

<i>Failing to furnish a copy of a log or record of work to the State Engineer as required by NRS 534.170, intentionally making a material misstatement of fact in a log or record of work submitted to the State Engineer pursuant to NRS 534.170 or intentionally making a material misstatement of fact in an amendment to a log or record of work submitted to the State Engineer pursuant to NRS 534.170</i>	<i>75</i>
<i>Submitting a log or record of work to the State Engineer pursuant to NRS 534.170 more than 30 days after a well is completed</i>	<i>10</i>

<i>Classification of Violations</i>	<i>Maximum Demerits</i>
<i>Submitting a log or record of work to the Division pursuant to NAC 534.420 more than 30 days after a water well has been plugged.....</i>	<i>10</i>
<i>Licenses</i>	
<i>Intentionally making a material misstatement of fact in an application for a well-drilling license.....</i>	<i>100</i>
<i>A well driller failing to have his license card in his possession at a drilling site or failing to produce his license card when requested to do so by a representative of the Division as required by NAC 534.330</i>	<i>10</i>
<i>Failing to have a licensed well driller at a well-drilling site when a drill rig is in operation or when any activity involving the construction or plugging of the well is conducted as required by NAC 534.330. (Demerit points will be assessed against the license of the principal well driller for the well-drilling company and against the license of the well driller listed on the notice of intent.)...</i>	<i>50</i>

Classification of Violations

Maximum

Demerits

Well construction and plugging

Failing to comply with any provision of this chapter which establishes standards for the construction or plugging of a well, including, without limitation, improperly placing the annular seal, constructing a well with substandard well casing, using improper products or procedures during the construction or plugging of a well and failing to protect against contamination 75

Failing to make a well accessible to measurements of the water level of the well as required by NAC 534.430 30

Failing to prevent, control or stop the flow of water from an artesian well as required by NRS 534.060 and NAC 534.378..... 30

Approvals

Drilling a replacement well more than 300 feet from the location of the existing point of diversion described in the permit or moving the replacement well outside of the 40-acre subdivision described in the permit, waiver or certificate of water right in violation of NAC 534.300 25

Classification of Violations

Maximum

Demerits

Failing to comply with any term or condition of a permit, waiver or order issued by the State Engineer concerning the drilling of a well as required by NAC 534.330, including, without limitation, the depth of the annular seal, the location of perforations and the minimum or maximum depth of the well.....

50

Miscellaneous

Any other violation of any of the provisions of this chapter or chapter 534 of NRS.....

To be

determined by

the Division

based on

the severity of

the violation,

but not to

exceed 10

2. The Division shall assess demerit points against the license of a well driller only:

(a) After the State Engineer makes a finding that the well driller has violated a provision of this chapter or chapter 534 of NRS as provided in subsection 1;

(b) After the Division gives written notice of an alleged violation to the well driller by registered or certified mail to the last known address of the well driller which specifies the provision of this chapter or chapter 534 of NRS that the well driller is alleged to have violated;

(c) If, within 30 days after the date on which the well driller receives a notice of an alleged violation sent pursuant to paragraph (b), the well driller has failed to respond to the notice of an alleged violation or provides a response to the notice of an alleged violation that is unsatisfactory, as determined by the Division; and

(d) After the conditions set forth in paragraphs (a), (b) and (c) are satisfied, regardless of when the violation occurred.

3. If a licensed well driller accumulates 100 or more demerit points, the State Engineer may, after giving notice and holding a hearing pursuant to NRS 534.160 to determine that the violations which resulted in the demerit points occurred, suspend the license of the well driller indefinitely. If the State Engineer suspends the license of a well driller, the Division shall notify the well driller that his license is suspended and the well driller is prohibited from engaging in any activity for which a well-drilling license issued pursuant to NRS 534.140 is required until the license of the well driller is reinstated.

4. A well driller whose license has been suspended pursuant to subsection 3 may have his license reinstated if the well driller:

(a) Satisfies the requirements set forth in NAC 534.293;

(b) Appears before the State Engineer at a hearing and the State Engineer finds that the well driller is competent to engage in the practice of well drilling in the State of Nevada; and

(c) Resolves any outstanding complaints related to his license as a well driller to the satisfaction of the Division.

5. The Division shall reduce the number of demerit points accumulated against the license of a well driller whose license has been suspended pursuant to subsection 3 and reinstated pursuant to subsection 4 to zero.

6. Demerit points assessed against the license of a well driller may be removed by the Division as follows:

(a) Five demerit points may be removed for each credit unit of continuing education approved by the Division and successfully completed by the well driller, as determined by the Division up to a maximum of 50 points per year. The credit units of continuing education that must be completed for the purposes of the removal of demerit points pursuant to this paragraph are in addition to those required by section 4 of this regulation.

(b) One-half of the demerit points assessed against the license of a well driller may be removed if the well driller is determined by the State Engineer to not have violated a provision of this chapter or chapter 534 of NRS for the entire year before his license is required to be renewed pursuant to NRS 534.140.

(c) Twenty demerit points may be removed if the well driller takes and passes the written examination section of the examination for a license as a well driller. The Division may remove demerit points pursuant to this paragraph once every other year.

Sec. 4. 1. *A well driller may renew his well-drilling license by submitting a renewal application to the Division. The renewal application must:*

(a) Be completed and signed by the well driller on a form provided by the Division;

(b) Be accompanied by the renewal fee prescribed in NRS 534.140; and

(c) Except as otherwise provided in paragraph (b) of subsection 5 of section 7 of this regulation, subsection 6 of section 7 of this regulation and subsection 4 of NAC 534.293, include documentation satisfactory to the Division that the applicant has completed four credit units of continuing education within the previous year beginning July 1 and ending June 30.

2. If the State Engineer has notified a well driller during the previous year that the well driller has violated a provision of this chapter or chapter 534 of NRS related to welding involving work that does not comply with the construction standards for wells, the well driller must obtain a certificate as a certified welder from the American Welding Society or another similar organization approved by the Division and include the certificate with his application for renewal of his license.

Sec. 5. *1. The Division shall process each application submitted for renewal of a well-drilling license pursuant to section 4 of this regulation in the order in which the applications are received by the Division. A well driller must submit his application for renewal to the Division so that the Division receives the application not later than June 15 to ensure that the license will remain in force and continue without interruption. If the State Engineer determines that an application is complete and the applicant is qualified, the Division shall renew the license for the period ending on June 30 of the year after approval of the renewal.*

2. The Division shall not renew a license if the State Engineer determines, upon investigation and after a hearing held upon at least 15 days' notice sent by registered or certified mail to the licensed well driller, that the well driller:

(a) Has not submitted all required notices of intent to the Division as required by NAC 534.320;

(b) Has not furnished a copy of the log and record of work for every well drilled to the State Engineer as required by NRS 534.170;

(c) Has not complied with all orders requiring the repair or plugging of improperly constructed wells;

(d) Is not otherwise in compliance with this chapter or chapter 534 of NRS; or

(e) Has accumulated 100 demerit points or more against his license.

3. If the State Engineer determines, after consultation with the Board, that a well driller has an unacceptable history of noncompliance with this chapter and chapter 534 of NRS, the Division may deny renewal, refuse renewal for a specified time, or renew the license of the well driller with conditions that the State Engineer considers appropriate. In making this determination, the State Engineer may consider the actions of the well driller within the 5 years immediately preceding the date on which the renewal application is received by the Division with regard to his well-drilling license or other permits issued by the State Engineer pursuant to this chapter or chapter 534 of NRS.

Sec. 6. 1. The owner of a well, other than a well drilled for domestic use, who wishes to obtain a waiver pursuant to subsection 7 or 8 of NRS 534.060 from the requirement that a well be plugged must submit a written request for the waiver to the State Engineer. The State Engineer will grant such a waiver which is valid for 1 year after the date on which the waiver is requested unless the State Engineer finds that the well is dry or abandoned. On or before the date on which the waiver is no longer valid, the owner of the well may submit a request to

extend the waiver or to make the waiver permanent, if appropriate, as determined by the State Engineer.

2. A request for a waiver, the extension of a waiver or to make a waiver permanent made pursuant to subsection 1 must:

(a) Be made on a form provided by the State Engineer; and

(b) Include sufficient information and evidence for the State Engineer to determine that the well is not in any manner defective, including, without limitation, that the conditions set forth in subsection 2 of NAC 534.427 do not apply to the well.

Sec. 7. *1. A credit unit of continuing education is earned for each hour the holder of a well-drilling license attends a workshop, seminar or course or participates in any other type of educational activity related to well drilling or related subjects approved by the Division. Such educational activities may include, without limitation, the completion of college courses, correspondence courses or videotaped courses, active participation in professional organizations and authoring appropriate publications.*

2. A well driller must maintain documentation verifying that he has completed the number of credit units of continuing education required by section 4 of this regulation. Documentation of completion of continuing education which is satisfactory to the Division includes, without limitation:

(a) A log, on a form provided by the State Engineer, indicating the type of educational activity claimed, the sponsoring organization, the duration of the course or activity, the name of the instructor and the number of credit units; and

(b) Documents providing evidence of attendance at or participation in an educational activity, including, without limitation, a certificate of completion.

3. A well driller shall maintain the documentation required pursuant to subsection 2 for a period of 3 years after the date of completion of the credit units of continuing education and shall make the documentation available for review by the State Engineer at the request of the Division.

4. Except as otherwise provided in subsection 5 or 6, the Division shall deny the renewal of a license if, at the time of renewal, the well driller is unable to provide documentation of completion of the number of credit units of continuing education required by section 4 of this regulation.

5. The Division may:

(a) Withhold action on the application for renewal of the license for a period not to exceed 90 days to allow a well driller to provide documentation of the required credit units of continuing education. The well driller is not authorized to drill until the documentation is provided and the Division has renewed the license.

(b) Exempt a well driller from all or part of the number of credit units of continuing education required by section 4 of this regulation if the well driller:

(1) Served on active duty in the Armed Forces of the United States for 120 consecutive days or more during the licensing period immediately preceding the application for renewal;
or

(2) Was prevented from earning the number of credit units of continuing education required by section 4 of this regulation because of a physical disability, serious illness or other extenuating circumstances.

6. A well driller who has allowed his license to expire or otherwise become of no effect is exempt from the requirements of continuing education set forth in section 4 of this regulation unless the well driller files an application for renewal of his license within 3 years after his license expired or otherwise became of no effect.

7. A well driller who is not a resident of this State is subject to the same requirements of continuing education as a well driller who is a resident of this State.

8. The Division shall request that the Nevada Ground Water Association:

(a) Develop a program for continuing education for review and, if appropriate, approval by the Division;

(b) Implement a program that is developed and approved pursuant to paragraph (a);

(c) Provide recommendations to the Division concerning:

(1) The amount and nature of continuing education that is necessary to maintain and improve the competency of a well driller; and

(2) The number of credit units of continuing education that should be assigned to specific educational activities; and

(d) Encourage other associations for well drillers, related professional organizations and educational institutions to make additional educational activities available for well drillers.

9. If the Nevada Ground Water Association does not submit a program for continuing education to the Division pursuant to subsection 8, or if the program submitted pursuant to

subsection 8 is not approved by the Division, the Division may request that the Board or another established professional organization approved by the State Engineer:

(a) Develop a program for continuing education for review and, if appropriate, approval by the Division; and

(b) Implement a program that is developed and approved pursuant to paragraph (a).

10. The Division shall review each educational activity submitted to the Division to satisfy the continuing education requirements set forth in section 4 of this regulation to determine the number of credit units of continuing education, if any, to assign to the educational activity.

Sec. 8. *Before using bentonite grout to seal, grout or plug a well or borehole, the person using the bentonite grout must:*

1. Consider the geology of the well or borehole, the design of the well and any requirements set forth in this chapter or chapter 534 of NRS in his selection of the bentonite grout; and

2. Mix the bentonite grout and place the bentonite grout in accordance with specifications recommended by the manufacturer.

Sec. 9. NAC 534.042 is hereby amended to read as follows:

534.042 “Bentonite grout” means a *mixture of a commercially manufactured* product ~~[that]~~ *and water mixed pursuant to the specifications recommended by the manufacturer which* is specifically designed *by the manufacturer* to seal , *grout* and plug wells and boreholes and:

1. Consists of not more than 87.9 percent water and not less than 12.1 percent *sodium* bentonite by weight of water;

2. Has the ability to gel;

3. Does not separate into water and solid materials after it gels;
4. Has hydraulic conductivity or permeability values of 10^{-7} centimeters per second or less;
and

5. Has a fluid weight of not less than 9 pounds per gallon.

Sec. 10. NAC 534.185 is hereby amended to read as follows:

534.185 “Public *land* survey” means the description of the location of land using the survey system of the United States Government and includes the 40-acre subdivision within a quarter-quarter section, quarter section, section, township and range.

Sec. 11. NAC 534.280 is hereby amended to read as follows:

534.280 An application for a well-drilling license ~~for the renewal of a well-drilling license~~ must be submitted to the Division. The application ~~must~~ :

- 1. Must be completed and signed by the applicant on a form provided by the Division;*
- 2. Must be accompanied by the fee prescribed in NRS 534.140 ~~is~~; and*
- 3. Is valid, for each section of the examination that is required pursuant to NAC 534.282, for the first three dates on which that section of the examination is given which immediately follow the date on which the application is submitted to the Division.*

Sec. 12. NAC 534.282 is hereby amended to read as follows:

534.282 1. An applicant for a well-drilling license must:

- (a) *Be at least 18 years of age;*
- (b) *Be a citizen of the United States, or be lawfully entitled to remain and work in the United States;*
- (c) *Submit an application and the fee pursuant to NAC 534.280;*

(d) Demonstrate a good working knowledge of:

(1) Standard drilling practice;

(2) The regulations of the State Engineer and applicable laws relating to ~~the construction of wells;~~ *well drilling*; and

(3) The method by which land is described by public *land* survey ~~the~~ ~~(b)}~~;

(e) Have at least 2 years of experience *as a well driller* determined to be appropriate by the State Engineer for the license for which the applicant applies ~~the~~ ~~(e)}~~;

(f) *Have at least four references determined to be satisfactory by the State Engineer for the license for which the applicant applies; and*

(g) Pass an examination, consisting of ~~an oral portion and a written portion, conducted by the State Engineer and the Board.~~ *the following three sections:*

(1) *A written examination on which the applicant must obtain a score of at least 70 percent;*

(2) *A section which requires the applicant to use a map to provide the public land survey description of the location of a well; and*

(3) *An oral examination conducted by the Board.*

2. The State Engineer may deny an applicant a license if ~~he:~~ *the applicant:*

(a) Fails to notify the Division that he cannot appear for the examination as instructed by a notice to appear before the State Engineer or the Board; *or*

(b) ~~[Has notified the Division on three occasions that he cannot appear for the examination as instructed by a notice to appear before the State Engineer or the Board; or~~

~~—(c) Has failed any portion of the examination three times.]~~ *Fails to pass all three sections of the examination described in paragraph (g) of subsection 1 within the period for which the application is valid pursuant to NAC 534.280.*

Sec. 13. NAC 534.286 is hereby amended to read as follows:

534.286 Except as otherwise provided in NAC 534.288, the Board shall conduct the oral ~~[portion]~~ *examination section* of the examination for each applicant for a well-drilling license. The oral ~~[portion]~~ *examination section* of the examination must be conducted to determine the sufficiency of the applicant's:

1. Knowledge of the provisions of *this chapter and* chapter 534 of NRS ~~[and this chapter; and]~~, *including, without limitation, knowledge of the minimum standards established in this chapter for the construction and plugging of wells;*
2. Qualifications and experience ~~[]~~;
3. *Proficiency in the operating procedures and construction methods associated with the various types of drilling rigs used for well drilling; and*
4. *Ability to resolve problems that may arise during the construction or plugging of a well.*

Sec. 14. NAC 534.288 is hereby amended to read as follows:

534.288 The Board is not required to conduct the oral ~~[portion]~~ *examination section* of the examination for an applicant for a well-drilling license who:

1. Receives a score of less than 70 percent on the written ~~[portion]~~ *examination section* of the examination; or

2. Is unable to demonstrate his ability to locate a well *by public land survey* on a topographic map.

Sec. 15. NAC 534.290 is hereby amended to read as follows:

534.290 1. The State Engineer may revoke or refuse to reissue a well-drilling license if he determines, after an investigation and a disciplinary hearing, that the well driller has:

- (a) ~~Intentionally made a material misstatement of facts in his application for a license;~~
 - ~~—(b) Intentionally made a material misstatement of facts in a log or record of work;~~
 - ~~—(c) Been found to be incompetent as a well driller by the State Engineer or the Board;~~
 - ~~[(d) Failed to submit a log or record of work for wells drilled in accordance with the provisions of this chapter;~~
 - ~~—(e) Failed to comply with or violated any of the provisions of this chapter;~~
 - ~~—(f) Failed to comply with or violated any law applicable to well drillers;~~
 - ~~—(g) Falsely sworn to any affidavit, proof of completion, proof of beneficial use, log or any other document filed with the Division;~~
 - ~~—(h)]~~ (b) Supplied false information to an owner of a well or a holder of a permit or his agent;
- or

~~[(i)]~~ (c) Failed to report information concerning improper construction or ~~[the abandonment]~~ *improper plugging* of a well pursuant to NAC ~~[534.448.]~~ *534.355.*

2. The State Engineer will avail himself of the services of the Board pursuant to NRS 534.150 if he determines that to do so is appropriate under the circumstances.

Sec. 16. NAC 534.293 is hereby amended to read as follows:

534.293 A well driller whose license has been expired for more than 1 year or whose license has been *suspended or* revoked ~~[-~~:

~~—1. *Must file*]~~ *must:*

1. File a new application with the fee required by NRS 534.140 to obtain a license ~~[-~~

~~—2. *Before resolving a complaint in his file, must appear before the Board for disposition of the complaint.*~~

~~—3. *May be required by the Board to pass*]~~ ;

2. Pass the examination required by NAC 534.282 ~~[-~~];

3. Reduce the number of demerit points he has accumulated against his license to 74 or less; and

4. Provide documentation satisfactory to the Division that he has completed the requirements for continuing education set forth in section 4 of this regulation within the 12 months immediately preceding the date on which he files his new application for a license pursuant to subsection 1.

Sec. 17. NAC 534.296 is hereby amended to read as follows:

534.296 1. The State Engineer may issue a temporary well-drilling license to an employee of a drilling contractor if the drilling contractor has insufficient personnel to complete existing contracts.

2. If the employee of a drilling contractor submits an application for a temporary license, the drilling contractor or an employee of the drilling contractor must:

(a) Hold a well-drilling license issued by the State Engineer; and

(b) Sign and submit a letter to the Division containing:

- (1) A request that the person named in the application be given a temporary license;
 - (2) A statement from the contractor ~~[]~~ *or* the licensed employee of the contractor ~~for another licensed well driller~~ stating that the person who is making the statement will take full responsibility for the drilling performed by the prospective temporary licensee; and
 - (3) A statement that the prospective temporary licensee will comply with all regulations for drilling wells.
3. The State Engineer will evaluate the qualifications of the prospective temporary licensee and *, except as otherwise provided in subsection 4,* may issue *or reissue* a temporary license which expires on the date of the next available *written examination section of the* examination conducted by the Board.
4. *The State Engineer will not:*
- (a) Issue or reissue a temporary license if the applicant has had an application denied by the State Engineer pursuant to subsection 2 of NAC 534.282; or*
 - (b) Reissue a temporary license if the applicant has not obtained a passing score as set forth in NAC 534.282 on the written examination section of the examination.*
5. The drilling contractor *or the employee of the drilling contractor, whoever signed and submitted the letter described in paragraph (b) of subsection 2,* shall inform the Division in writing if the employment of the temporary licensee is terminated before the date of the next available examination. The *drilling* contractor *or the employee of the drilling contractor, whoever signed and submitted the letter described in paragraph (b) of subsection 2,* is responsible for any drilling performed by the temporary licensee until the notice of termination is received by the Division. The notice of termination must explain the reasons for terminating the

employment of the temporary licensee. The temporary license expires upon receipt of the notice by the Division.

Sec. 18. NAC 534.298 is hereby amended to read as follows:

NAC 534.298 A temporary well-drilling license:

1. Is valid until the next scheduled *written examination section of the* examination administered by the Board;
2. Authorizes well drilling to be performed only for the contractor who requested the license; and
3. Is not transferable.

Sec. 19. NAC 534.300 is hereby amended to read as follows:

534.300 1. Except as otherwise provided in NAC 534.315, a well driller shall not drill a water well within a groundwater basin designated by the State Engineer until the well driller determines that a permit to appropriate the groundwater has been issued pursuant to NRS 534.050.

2. ~~[A] Except as otherwise provided in subsection 3, a~~ water well may be drilled to replace an existing well if ~~[the existing well cannot be reconditioned and it will no longer produce the quantity of water allowed by the permit. A]~~ *a valid* permit, waiver or certificate of water right ~~[must exist]~~ *exists* for the well to be replaced.

3. *If continued use will not be made of the existing well, the existing well must be plugged as required by NAC 534.420 at the time the replacement well is drilled unless the owner of the well first obtains a waiver from the requirement that the well be plugged pursuant to subsection 7 or 8 of NRS 534.060 and section 6 of this regulation. If continued use will be*

made of the existing well, a permit must be issued for the replacement well before any drilling is commenced.

4. The replacement well must not be drilled more than 300 feet from the location of the existing ~~[well]~~ *point of diversion* described in the permit and may not be moved outside of the 40-acre subdivision described in the permit, waiver or certificate. ~~[The existing well must be plugged at the time the replacement well is drilled. If continued use will be made of the existing well, a permit or waiver must be issued for the replacement well before any drilling is commenced.]~~

Sec. 20. NAC 534.310 is hereby amended to read as follows:

534.310 1. Except as otherwise provided in NAC 534.315:

(a) In basins which have not been designated by the State Engineer, a person who drills a well before receiving a permit to appropriate water does so at the risk that a permit to appropriate water cannot be obtained; and

(b) A person shall not use water from a well until a permit or waiver has been obtained pursuant to NRS 534.050.

2. In basins which have not been designated by the State Engineer, the well driller may proceed to drill and perform tests on a well whether or not the owner of the property has a permit to appropriate water. The well driller shall submit to the State Engineer a notice of intent to drill and a log and record of work as prescribed in NAC *534.320 and* 534.340.

3. In basins which have not been designated by the State Engineer, a waiver is required for any water well:

(a) That does not comply with the requirements for construction prescribed in this chapter;

~~{or}~~

(b) The water appropriated from which will be used in constructing a highway or exploring for oil, gas, minerals or geothermal resources ~~{;}~~ *or*

(c) That may be used as a monitoring well.

Sec. 21. NAC 534.315 is hereby amended to read as follows:

534.315 1. Except as otherwise provided in subsection ~~{8,}~~ *10*, permits to appropriate groundwater are not required for the drilling of ~~{domestic wells.}~~ *wells for domestic use.*

2. A well driller shall take into account the normal annual fluctuations in the demand for water of an area and, if the well is in a developed area, some annual drop in static water level.

3. Water may not be diverted from more than one well for domestic use in one single-family residence.

4. A well drilled for domestic use only must have a casing size not larger than 8.625 inches in diameter.

5. If a ~~{domestic}~~ well *drilled for domestic use* cannot be reconditioned, a replacement *well* may be drilled if the original well is plugged as required by NAC 534.420 ~~{as soon as practicable after the new well is drilled.}~~ *before the equipment used for well drilling is moved from the drilling site.*

6. Except as otherwise provided in subsection 7, a well may be drilled for domestic use if not more than 1,800 gallons of water per day are diverted from the well for use by a single-family household, including a residence with a lawn, garden and domestic animals.

7. If water service is available from an entity ~~[such as]~~, *including, without limitation*, a public utility, a water district or a municipality presently engaged in furnishing water to the inhabitants of the area, a ~~[domestic]~~ well *for domestic use* may not be drilled, deepened, reconditioned or replaced ~~[.]~~ *unless a waiver from the provisions of this section is first obtained from the Division.*

8. *If the State Engineer has pursuant to subsection 2 of NRS 534.180 designated a groundwater basin or portion thereof as a basin in which the registration of a well drilled for the development and use of underground water for domestic purposes is required, a well drilled for domestic use in that basin or portion thereof must be plugged as required by NAC 534.420 if:*

(a) The conditions set forth in subsection 3 of NRS 534.180 are satisfied; and

(b) The State Engineer sends a notice to the owner of the well by certified mail, return receipt requested, indicating that the well must be plugged.

↪ The well must be plugged within 1 year after the owner of the well receives the notice from the State Engineer.

9. *If the State Engineer has not pursuant to subsection 2 of NRS 534.180 designated a groundwater basin or portion thereof as a basin in which the registration of a well drilled for the development and use of underground water for domestic purposes is required, a well drilled for domestic use in that basin or portion thereof must be plugged as required by NAC 534.420 if:*

(a) The well must be plugged pursuant to subsection 3 of NAC 534.427; and

(b) The State Engineer sends a notice to the owner of the well by certified mail, return receipt requested, indicating that the well must be plugged.

↪ The well must be plugged within 1 year after the owner of the well receives the notice from the State Engineer.

10. A permit must be obtained from the Division if:

(a) More than 1,800 gallons of water per day are diverted from a water well; or

(b) Water is ~~[diverted from the well for more than one single family dwelling.]~~ *used for purposes other than domestic use.*

Sec. 22. NAC 534.320 is hereby amended to read as follows:

534.320 1. A *well* driller shall notify the Division before drilling, reconditioning or plugging a well by submitting a notice of intent to drill. The notice must be submitted for work on an exploratory, water or monitoring well. A well driller shall notify the Division before drilling a geothermal well if a permit to appropriate water is required pursuant to NRS 534.050.

2. The notice *of intent to drill submitted pursuant to subsection 1* must give the name of the person for whom the work is being performed, the location of the well by public *land* survey, the lot number, block number and county assessor's parcel number, the purpose of the well, the date on which the work is to be commenced, the type of work to be done and the diameter of casing to be installed. The notice must ~~[be signed by the well driller or contractor, and the]~~ *include:*

(a) The signature of the contractor or the well driller responsible for the work; and

(b) The license number of the *well* driller ~~[who will be at the site and]~~ responsible for the work. ~~[must be included.]~~

~~3. The well driller shall submit to the Division a notice of intent to drill.]~~

3. The notice *of intent to drill submitted pursuant to subsection 1* must be received by the Division at least 3 working days before the well rig is to be set up and the drilling commenced. If a permit or waiver is required for the drilling operation, the number of the permit or waiver issued by the Division must be indicated on the notice of intent to drill in addition to the information required by subsection 2.

4. *In addition to the requirements of subsections 2 and 3, the notice of intent to drill must include global positioning system coordinates which:*

(a) Are either identified by latitude and longitude using decimal degrees or are identified using coordinates of the Universal Transverse Mercator system; and

(b) Specify for each coordinate whether the North American Datum of 1927, North American Datum of 1983 or the World Geodetic System 1984 was used.

5. *If a well driller omits any of the information required by this section from the notice of intent to drill submitted to the Division pursuant to subsection 1, the Division may return the notice of intent to drill to the well driller for correction. Well drilling must not begin until after the Division approves the corrected notice of intent to drill.*

6. *A well driller may submit the notice of intent to drill required pursuant to subsection 1 to the Division in an electronic format if the Division approves this manner of submission for the well driller before the well driller submits the notice of intent to drill.*

7. The forms evidencing notice of intent to drill will be furnished by the Division to the *well* driller on request and will be stamped and self-addressed.

~~[5.]~~ 8. If a well is to be drilled in a township that is located north of the Mount Diablo baseline, the notice of intent to drill must be submitted to the office of the Division located in Carson City. If a well is to be drilled in a township which is located south of the Mount Diablo baseline, the notice of intent to drill must be submitted to the office of the Division located in Las Vegas.

Sec. 23. NAC 534.325 is hereby amended to read as follows:

534.325 1. If the well described on a notice of intent to drill is not drilled within 60 days after the Division receives *and approves* the notice, the notice lapses and a new notice must be submitted before the well is drilled. The new notice must include the number of the lapsed notice.

2. The well driller may set up the drill rig and commence drilling immediately after the Division receives *and approves* the new notice.

3. The well driller shall indicate on the record of work for the well the number of the notice of intent to drill that the *well* driller last submitted for that well.

Sec. 24. NAC 534.330 is hereby amended to read as follows:

534.330 A well driller licensed by the State Engineer:

1. Must be present at the well-drilling site when the ~~[drilling]~~ *drill* rig is in operation ~~[.]~~ *and when any activity involving the construction or plugging of the well is conducted.* If the licensed well driller leaves the drilling site, the drilling operation must be shut down until ~~[the]~~ *that licensed well* driller or another well driller licensed pursuant to this chapter returns to the site.

2. Shall ensure that the drilling of the well complies with:

(a) The provisions of this chapter;

(b) The terms and conditions of any permit, waiver or order issued by the State Engineer; and

(c) The requirements of all other federal, state and local agencies which have jurisdiction over the land on which the well is to be drilled.

3. Shall carry his license card when he is present at the drilling site and produce the card when requested to do so by a representative of the Division.

Sec. 25. NAC 534.340 is hereby amended to read as follows:

534.340 1. A log and record of work submitted by a well driller pursuant to NRS 534.170 must be typewritten or legibly handwritten in black ink.

2. In addition to the information required pursuant to NRS 534.170, the following information must be contained in the *log and* record of work:

(a) The complete name and address of the person for whom the work is being performed.

(b) The location of the well, including:

(1) A description of its location by public *land* survey and county assessor's parcel number.

(2) *Global positioning system coordinates which:*

(I) Are either identified by latitude and longitude using decimal degrees or are identified using coordinates of the Universal Transverse Mercator system; and

(II) Specify for each coordinate whether the North American Datum of 1927, North American Datum of 1983 or the World Geodetic System 1984 was used.

(3) In a *log and* record of work for a ~~[domestic well,]~~ *well drilled for domestic use*, the address of the house to be served by the well, the lot and block description and the name of the subdivision.

~~[(3)]~~ (4) If applicable, the waiver number or permit number.

(c) ~~[If possible, the pressure head of the well and any]~~ *Any* pumping test or development data.

(d) An accurate identification of the water-bearing formations.

(e) If the static water level is measured from the top of the casing, the elevation of the top of the casing above the land surface.

3. An accurate description of the perforations in the casing must be set forth in the section of the *log and* record of work that contains a record of the well casing.

4. If the well driller does not have a thermometer, the temperature of the water may be described in the *log and* record of work as cold, warm or hot.

5. The flow from a well which flows or is pumped may be determined for the purpose of the *log and* record of work by measuring the length of time it takes to fill a container of known capacity if the flow is not too large to be measured in that manner.

6. As used in this section, “pumping test” means a test of a well conducted by pumping a specified amount or continuous flow of water from a well to determine the characteristics of the well or an aquifer.

Sec. 26. NAC 534.345 is hereby amended to read as follows:

534.345 1. All work performed by the well driller during the drilling operation must be accurately described in the *log and* record of work submitted by the well driller pursuant to NRS 534.170 and NAC 534.340.

2. *The completed log and record of work must be signed by:*

(a) The licensed well driller who is present at the well-drilling site as required pursuant to NAC 534.330; or

(b) The drilling contractor responsible for the work pursuant to NAC 534.296.

3. *A well driller may submit the log and record of work required to be submitted to the State Engineer pursuant to NRS 534.170 and NAC 534.340 in an electronic format if the Division approves this manner of submission for the well driller before the well driller submits the log and record of work.*

4. If any of the information required to be included by regulation or statute is omitted from the *log and* record of work, the Division will return the *log and* record of work *to the well driller* for correction. *Any corrections to the log and record of work must be made and submitted to the State Engineer within 30 days after the date on which the well driller receives the log and record of work from the Division. If corrections are made to the log and record of work and submitted to the State Engineer:*

(a) Thirty-one days or more after the date on which the well driller receives the log and record of work but less than 90 days after that date, the log and record of work shall be deemed to be submitted late and the Division shall assess demerit points against the license of the well driller pursuant to section 3 of this regulation; or

(b) Ninety days or more after the date on which the well driller receives the log and record of work, the log and record of work will be accepted by the State Engineer but the late submittal of the log and record of work shall be deemed to be a failure to file the log and record of work and the Division shall assess demerit points against the license of the well driller pursuant to section 3 of this regulation.

Sec. 27. NAC 534.355 is hereby amended to read as follows:

534.355 A licensed well driller who becomes aware of specific information relating to improper construction or ~~the abandonment~~ *improper plugging* of a well shall report that information to the Division as soon as practicable.

Sec. 28. NAC 534.360 is hereby amended to read as follows:

534.360 1. Except as otherwise provided in subsection 2, all wells must be cased to the bottom of the well bore and constructed to prevent contamination or waste of the ground water.

2. If no additional water is developed in the bottom portion of a well, neat cement, cement grout or concrete grout must be placed by tremie pipe in an upward direction from the bottom of the well to the bottom of the casing.

3. The casing must:

(a) Except as otherwise provided in this paragraph and NAC 534.362, be of new steel or clean and sanitary used steel. Materials other than steel may be used if the design of the well or the subsurface conditions prevent the use of steel casing and a professional engineer who holds a certificate of registration issued pursuant to chapter 625 of NRS has approved the casing materials.

(b) Be free of pits and breaks.

(c) Conform to the following minimum specifications, allowing for mill tolerance:

(1) If the conductor casing is 50 feet or less in depth, the thickness of the wall must be:

(I) At least 0.141 or $\frac{9}{64}$ of an inch if the wall is made of a material other than galvanized steel pipe that has been corrugated; or

(II) At least 0.109 or $\frac{7}{64}$ of an inch if the wall is made of galvanized steel pipe that has been corrugated.

(2) If the depth of the conductor casing exceeds 50 feet, and for all production or intermediate casing, the wall must be sufficiently thick to conform to the casing sizes listed in sub-subparagraphs (I) to (IV), inclusive:

(I) If the casing is smaller than 10 inches nominal size, the wall must be at least 0.188 or $\frac{3}{16}$ of an inch thick.

(II) For 10-, 12-, 14- and 16-inch nominal size casing, the wall must be at least 0.250 or $\frac{1}{4}$ of an inch thick.

(III) For 18- and 20-inch nominal size casing, the wall must be at least 0.312 or $\frac{5}{16}$ of an inch thick.

(IV) For casing larger than 20 inches nominal size, the wall must be at least 0.375 or $\frac{3}{8}$ of an inch thick.

4. The top of the casing on all wells must be at least 12 inches above the surface of the ground or the finished grade.

5. All production casing joints must be threaded and coupled or welded and be watertight. If the casing joints are welded, each joint must be welded completely. Spot welds of casing joints are prohibited.

6. The well driller shall ensure that the integrity of any casing to be used in the construction of the well has not been impaired by storage, shipping, handling , *perforating* or exposure to ultraviolet light.

Sec. 29. NAC 534.362 is hereby amended to read as follows:

534.362 1. New thermoplastic water well casing made of polyvinyl chloride may be used as casing in a well if the casing:

(a) Is clearly marked as well casing; and

(b) Complies with the standards adopted by the American Society for Testing and Materials, designated as ASTM ~~[F-480,]~~ *F-480-02*, which are hereby incorporated by reference. A copy of the standards may be obtained ~~[from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103,]~~ *by mail from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania 19428-2959 or by telephone at (610) 832-9585, at a cost of \$23 if prepaid, or \$24.61 if not prepaid.] \$48.50, or may be obtained at the Internet address <http://www.astm.org>, at a cost of \$45.*

2. If polyvinyl chloride *well* casing is used ~~[, the]~~ :

(a) *The differential pressures that may occur during the installation of casing, the development of the well and the operation of the well must be considered by the well driller and the person responsible for designing the well.*

(b) *The wall thickness must:*

(1) For nominal diameters that are 6 inches or less, conform to a rating of schedule 40 or heavier. For example, a nominal pipe that is 6 inches in diameter and has a rating of schedule 40 must have a wall thickness of at least 0.280 inch. The ASTM standard dimension

ratio that would exceed this standard is an ASTM standard dimension ratio of 21 or heavier. An ASTM standard dimension ratio of 26 would not satisfy the requirements of this subparagraph for nominal diameters that are 6 inches or less.

(2) For nominal diameters that are more than 6 inches, conform to the ASTM standard dimension ratio of 21 or heavier. For example, a nominal pipe that is 8 inches in diameter and has an ASTM standard dimension ratio of 21 must have a wall thickness of at least 0.410 inch. A rating of schedule 40 would not satisfy the requirements of this subparagraph for a nominal pipe that is 8 inches in diameter and has a wall thickness of 0.322 inch.

(c) *The* joint connections must be:

~~[(a)]~~ (1) Flush-threaded;

~~[(b)]~~ (2) Threaded and coupled; or

~~[(c)]~~ (3) Joined with nonmetallic couplings that are sealed with elastomeric sealing gaskets

and which consist of flexible thermoplastic splines that are inserted into precisely machined grooves in the casing.

↪ The joint connections must not be glued or joined by restraining devices that clamp into or otherwise damage the surface of the casing. If the joint connections are flush-threaded or threaded and coupled, the well driller shall ensure that the connections are not over-tightened.

3. If polyvinyl chloride *well* casing is used in a water well or monitoring well, the well driller shall set a protective steel casing which complies with the provisions of NAC 534.360 and extends not less than 5 feet inside the sanitary seal and not less than 1 foot above the finished grade. The top of the protective casing must be fitted with a locking cap or a standard sanitary well cap.

Sec. 30. NAC 534.378 is hereby amended to read as follows:

534.378 1. If an artesian condition is encountered in a well, the well driller shall, in addition to complying with the provisions of subsections 2 and 3 of NRS 534.060, ensure that unperforated casing extends through the confining strata above the artesian zone. The annular space between the casing and the walls of the well bore must be sealed by placing neat cement, cement grout or bentonite grout, that consists of not less than 30 percent bentonite, by tremie pipe in an upward direction from the top of the artesian zone to the level necessary to prevent the leakage of artesian water above or below the surface.

2. Any flow of artesian water must be stopped completely *in the manner set forth in subsection 3 of NRS 534.060* before the drill rig is removed from the drill site.

Sec. 31. NAC 534.380 is hereby amended to read as follows:

534.380 1. ~~[Before]~~ *Except as otherwise provided in subsection 2, before* the drill rig is removed from the drill site of a well, the annular space between the well bore and the casing must be sealed *to a minimum depth of 50 feet below ground level* by:

(a) Placing neat cement, cement grout, concrete grout or bentonite grout, which consists of not less than 30 percent bentonite, from the sealing depth to 10 feet from the surface; and

(b) Placing neat cement, cement grout or concrete grout from 10 feet below the surface to the surface.

2. *Before the drill rig is removed from the drill site of a well, the annular space between the well bore and the casing must be sealed to a depth of greater than 50 feet below ground level if sealing to such a depth is required by subsection 1 of NAC 534.370, NAC 534.375, subsection 1 of NAC 534.378 or paragraph (b) of subsection 1 of NAC 534.390.*

3. The casing must be centered as nearly as practicable in the well bore to allow the sanitary seal to surround the casing.

~~{3-}~~ 4. If a temporary conductor casing is used, it must be withdrawn during the placement of the grout.

~~{4-}~~ 5. If a pitless adapter is used in domestic or small commercial wells:

- (a) The sanitary seal must begin not more than 5 feet below ground level;
- (b) The sanitary seal must extend at least 50 feet below ground level; and
- (c) The portion of the casing above the sanitary seal must be backfilled to ground level with uncontaminated soil which is compacted.

~~{5-}~~ 6. A pipe used to feed gravel through the cement seal or to provide access to the interior of the well must be fitted with a watertight cap.

~~{6-}~~ 7. A licensed *well* driller must place the seal or directly supervise the placement of the seal.

~~{7-}~~ 8. The seal must be placed:

- (a) In the annular space within 3 days after the casing is set and before the drill rig is removed from the drill site.
- (b) In one continuous mass ~~{for completed within 24 hours.}~~ *from the minimum depth of 50 feet below ground level to the surface.*
- (c) By tremie pipe in an upward direction to displace the fluid to the surface of the ground, if any fluid is standing in the well bore above the sealing depth.

~~{8-}~~ 9. The diameter of the well bore must be at least 4 inches larger than the *largest* diameter of the outside of the outermost casing to be used ~~{,}~~ *, including any joints or collars.* If

a fill pipe for gravel is installed, the diameter of the well bore must be 4 inches larger than the *largest* diameter of the casing plus the *largest* diameter of the fill pipe for gravel. A fill pipe for gravel or any other pipe to provide access to the interior of the well must be completely surrounded by the seal. A conductor casing may be used to convey the gravel pack. If a conductor casing is used:

- (a) The diameter of the well bore must be at least 4 inches larger than the *largest* diameter of the conductor casing; and
- (b) The annular space between the conductor casing and the well bore must be sealed.

~~9.1~~ *10.* A watertight seal must be installed at the surface level between the conductor casing and the production casing to prevent any contaminants from entering the gravel pack conductor area. A welded plate or *a seal consisting of neat cement, cement grout or* concrete ~~seal~~ *grout from a minimum depth of 10 feet below ground level to the surface* must be used. If a welded plate is used, the entire length of the plate must be welded to the conductor casing and production casing.

Sec. 32. NAC 534.420 is hereby amended to read as follows:

534.420 1. Except as otherwise provided in NAC 534.422, wells must be plugged in the manner prescribed in this section by a *well* driller licensed by the State Engineer.

2. A *well* driller shall:

(a) Ensure that a notice of his intent to plug a water well is received by the Division not less than 3 working days before the drill rig is moved to the location where the well will be plugged; and

(b) Notify the Division not less than 24 hours before he begins to plug the well.

3. Before the *well* driller begins to plug the well, he shall, if possible, obtain the log and record of work for that well from the Division or the owner of the well.

4. On abandonment or order of the State Engineer, a water well must be plugged by:

(a) Removing the pump or debris from the well bore with appropriate equipment; and

(b) If an annular cement seal was not installed, breaking the casing free with appropriate equipment so that the casing may be pulled from the well.

5. If the casing in the well:

(a) Breaks free, the *well* driller shall plug the borehole in the manner prescribed in NAC 534.4371 as the casing is pulled from the well . ~~[or after the casing is removed from the well if the borehole remains intact.]~~ The well must be plugged from the total depth of the well to the surface of the well, in stages if necessary, to displace in an upward direction any fluid or debris in the well.

(b) Does not break free, the *well* driller shall perforate that portion of the casing which extends from the bottom of the well to not less than 50 feet above the top of the uppermost saturated groundwater stratum. That portion of the casing must be perforated not less than four times per *each 2* linear ~~[foot]~~ *feet* to allow the plugging fluid to penetrate the annular space and the geologic formation. The perforations made in each *2* linear ~~[foot]~~ *feet* of the casing must be made along a horizontal plane of the well bore. ~~[The angle between any two consecutive perforations made on a horizontal plane must not exceed 90 degrees, as measured from the center of the well bore.]~~ A well with a diameter of more than 8 inches in nominal size must be perforated a sufficient number of additional times per linear foot to ensure that the plugging fluid penetrates into the annular space and formation. The well driller shall then plug the well from the

total depth of the well to 50 feet above the uppermost saturated groundwater stratum or to within 20 feet of the surface of the well, whichever is less, with neat cement or bentonite grout specifically designed to plug abandoned wells. *If the neat cement or bentonite grout is not brought to within 20 feet of the surface of the well, the well driller shall:*

(1) Measure the depth of the top of the lower plug with the appropriate equipment after he has allowed sufficient time for the lower plug to set up;

(2) Continue to install neat cement or bentonite grout until the top of the lower plug remains at least 50 feet above the top of the uppermost saturated groundwater stratum; and

(3) Install uncontaminated fill material or one of the plugging materials described in subsection 3 of NAC 534.4371 from the top of the lower plug to within 20 feet of the surface of the well.

6. The well driller shall place a surface plug in the well consisting of neat cement, cement grout or concrete grout ~~[]~~ from a depth of at least 20 feet to the surface ~~[]~~ *of the well.*

7. If the well casing does not break free and there is no evidence of a sanitary seal around the well casing, the *well* driller shall, in addition to the requirements of subsection 5, perforate the upper 50 feet of casing before setting the surface plug. The casing must have at least four perforations per *each 2* linear ~~[feet]~~ *feet* of casing , and the surface plug must consist of neat cement ~~[]~~ *and must extend from 50 feet below ground level to the surface of the well.*

8. A well driller shall submit a ~~[written-report]~~ *log and record of work* to the Division within 30 days after a water well has been plugged. The ~~[report]~~ *log and record of work* must contain the location of the well by public *land* survey and county assessor's parcel number, the

name of the owner of the well, the condition of the well, the static water level before plugging and a detailed description of the method of plugging, including, but not limited to:

- (a) The depth of the well;
- (b) The depth to which the materials used to plug the well were placed;
- (c) The type, size and location of the perforations which were made in the casing;
- (d) The debris encountered in, milled out of or retrieved from the well; and
- (e) The materials used to plug the well.

9. If there is any standing liquid in the interval of the well bore that is being plugged, all grout materials used pursuant to this section must be placed by tremie pipe in an upward direction.

Sec. 33. NAC 534.422 is hereby amended to read as follows:

534.422 1. A well driller who wishes to plug a well in a manner that does not comply with the provisions set forth in NAC 534.420 must request approval from the Division.

2. If the Division authorizes the well driller to plug the well in a manner other than the manner set forth in NAC 534.420, the well driller shall comply with the instructions he receives from the Division, if any, relating to the manner in which the well must be plugged.

3. A contractor licensed pursuant to chapter 624 of NRS, or any other person, may request and obtain a waiver of the requirement of NAC 534.420 that a well must be plugged by a well driller licensed by the State Engineer if the contractor or other person provides proof satisfactory to the State Engineer that the contractor or other person has the ability to comply with the other requirements of NAC 534.420. A contractor or other person who obtains a

waiver pursuant to this subsection must comply with the provisions of NAC 534.420 as if he were a licensed well driller.

Sec. 34. NAC 534.424 is hereby amended to read as follows:

534.424 1. If a well is located on private land, the owner of the land at the time the well is plugged is responsible for the cost of plugging the well.

2. If a well is located on public land, the person who last drilled or used the well is responsible for the cost of plugging the well. If the person who last drilled or used the well does not plug the well ~~[within 1 year]~~ after receiving notice from the Division by certified mail, return receipt requested, that the well must be plugged, the *Division shall notify the* person who owns the land on which the well is located ~~[must]~~ *that it is his responsibility to* plug the well.

Sec. 35. NAC 534.427 is hereby amended to read as follows:

534.427 1. If any type of permit, waiver or application to appropriate water from a water well is cancelled, abrogated, forfeited, withdrawn or denied, the well must be plugged in the manner prescribed in NAC 534.420.

2. ~~[A]~~ *Except as otherwise provided in subsection 9 of NAC 534.315, a* well, other than a water well drilled for a domestic purpose, ~~[for which a permit or waiver has not been issued must also]~~ *must* be plugged in the manner prescribed in NAC 534.420 ~~[.]~~ *if:*

(a) The Division has not issued a permit or waiver for the well; or

(b) The well is not located in a designated basin and there is no reasonable expectation of obtaining a valid permit, waiver or certificate of water right from the Division.

3. A well, including a water well drilled for a domestic purpose, must also be plugged in the manner prescribed in NAC 534.420 if the State Engineer sends a notice to the owner of the well pursuant to subsection 9 of NAC 534.315 and either:

(a) The State Engineer has determined that the well is in any manner defective; or

(b) The Division makes a finding that:

(1) The well tends to impair existing rights or the safety and welfare of the residents of this State;

(2) The mechanical integrity of the construction of the well has failed or is unknown;

(3) The well was not drilled in compliance with the provisions of this chapter;

(4) The well was not drilled in compliance with the provisions of chapter 534 of NRS;

(5) The well tends to cause contamination of the groundwater aquifer;

(6) There is no evidence of impending use of the well for any legal purpose or that no legal use of the well is allowed; or

(7) The well tends to cause water to be wasted above or below the surface of the well.

Sec. 36. NAC 534.432 is hereby amended to read as follows:

534.432 If a well was:

1. Constructed by a person who, at the time the well was constructed, was not the holder of a well-drilling license issued pursuant to NRS 534.140; or

2. Not constructed or completed in compliance with the provisions of this chapter as determined by the State Engineer,

↪ the well must be abandoned and plugged in the manner prescribed in NAC 534.420 ~~and~~ *at the expense of the person who constructed the well.*

Sec. 37. NAC 534.4351 is hereby amended to read as follows:

534.4351 1. A monitoring well must be:

- (a) Drilled only by a well driller who is licensed by the State Engineer;
- (b) Constructed in accordance with the provisions of this chapter, except for any provision that is waived by the State Engineer; and
- (c) Drilled only for the purpose of complying with federal, state or local environmental requirements or any other federal, state or local requirements.

2. A plat map showing the actual location of the monitoring well , *a map of the vicinity* and a *log and* record of work which contains the information described in NRS 534.170 and NAC 534.340 must be submitted within 30 days after completion of the well by the person who is responsible for the well. The plat map must indicate the distance of the well from permanent reference points, including streets, roads or section lines. The map must be drawn on paper measuring 8 1/2 inches by 11 inches or 11 inches by 17 inches.

Sec. 38. NAC 534.4365 is hereby amended to read as follows:

534.4365 1. Except as otherwise provided in this section, a monitoring well must be plugged ~~[in the manner prescribed in NAC 534.420 within 3]~~ *within 30* days after ~~[it is abandoned.]~~ *monitoring is no longer required.*

2. Except as otherwise provided in subsections 3 and 4, a monitoring well ~~[may]~~ *must* be plugged by ~~[~~ *placing* neat cement or a high-solids bentonite grout, which consists of not less than 20 percent bentonite ~~[~~ *by weight of water*, by tremie pipe in an upward direction from the bottom of the well to the surface ~~[; or~~

~~—(b) Placing sodium bentonite pellets or granules or bentonite grout from the bottom of the well to 20 feet below the surface and placing neat cement from 20 feet below the surface to the surface. Sodium bentonite pellets or granules may not be placed in more than 100 feet of standing liquid unless the pellets or granules have been coated by the manufacturer to delay hydration.~~

~~—3. The] of the well.~~

3. *If the* casing in the monitoring well ~~[must]~~ *can* be removed from the well bore ~~[if:~~

~~—(a) The soil or water in the well is contaminated;~~

~~—(b) The well was not constructed pursuant to the provisions of this chapter; or~~

~~—(c) The well was constructed by a person who is not a licensed well driller.~~

~~➔ Except as otherwise provided in subsection 4,]~~ *the bottom end of the casing in the*

monitoring well must be removed or perforated and neat cement or high-solids bentonite grout must be placed by tremie pipe in an upward direction from the bottom of the well to the surface *of the well* as the casing is removed from the well bore.

4. If the integrity of the borehole remains intact as the casing is removed from the well bore, the well may be plugged as provided in NAC 534.4371.

Sec. 39. NAC 534.4369 is hereby amended to read as follows:

534.4369 1. A borehole may be drilled or plugged by a person who is not a licensed well driller.

2. A person who constructs *or plugs* a borehole is not required to file with the Division a notice of intent to drill or plug the borehole.

3. A borehole may be drilled without obtaining from the Division a permit to appropriate water or a waiver of the requirement to obtain such a permit.

4. A person who drills or plugs a borehole, the operator of the exploration project or the owner of the land where the borehole is located must maintain a record of the drilling operation which includes:

- (a) The dates on which the borehole is constructed and plugged;
- (b) The location of the borehole as shown by public *land* survey;
- (c) The depth and diameter of the borehole;
- (d) The depth at which groundwater is encountered in the borehole; and
- (e) The methods and materials used to plug the borehole.

5. The State Engineer may, at any time, require the person drilling or plugging the borehole, the operator of the exploration project or the owner of the land on which the borehole is located to submit to the State Engineer a copy of the record required pursuant to subsection 4 and any other information relating to the construction, operation or plugging of the borehole that the State Engineer determines is necessary.

6. The owner and the lessor of the land on which a borehole is located, the operator of the exploration project and the drilling or plugging contractor for the project shall ensure that the groundwater is uncontaminated during the drilling, operation or plugging of the borehole.

7. A borehole must not be used to divert water for any purpose.

Sec. 40. NAC 534.4371 is hereby amended to read as follows:

534.4371 1. A borehole must be plugged within 60 days after it is drilled.

2. Except as otherwise provided in ~~[subsections 3 and 4,]~~ *subsection 4*, a borehole must be plugged:

(a) In the manner prescribed in NAC 534.420; *or*

(b) If the ~~[highest]~~ *uppermost* saturated *groundwater* stratum is ~~[not more than 60 feet]~~ above the bottom of the borehole ~~[, by]~~ :

(1) By placing concrete grout, cement grout, neat cement or bentonite grout by tremie pipe in an upward direction from the bottom of the borehole to *within 10 feet of* the surface ~~[or by]~~ *and by placing concrete grout, cement grout or neat cement from 10 feet below the surface to the surface;*

(2) By placing sodium bentonite chips or pellets specifically designed to be used to plug boreholes from the bottom of the borehole to *within 10 feet of the surface and by placing concrete grout, cement grout or neat cement from 10 feet below the surface to* the surface; or

~~[(c) If the highest saturated stratum encountered in the borehole is more than 60 feet above the bottom of the borehole, by:~~

~~——(1) Plugging the portion of the borehole from the bottom to 50 feet above the highest saturated stratum encountered in the borehole in the manner described in paragraph (a);~~

~~——(2) Backfilling the portion of the borehole that extends from the materials placed in the borehole pursuant to subparagraph (1) to 10 feet from the surface with compacted soil which is uncontaminated; and~~

~~——(3) Placing any of the materials described in paragraph (a) from 10 feet below the surface to the surface.~~

~~—3. If a contaminant or contaminated water is encountered in a borehole, the strata that contain the contaminant or contaminated water must be sealed in the manner prescribed in subsection 2 to prevent the contaminant or contaminated water from commingling with other strata or the water contained in other strata. The vertical movement of contaminants in the well bore must be prevented.~~

~~—4.]~~ (3) *By placing any of the plugging materials described in this subsection from the total depth of the borehole to 50 feet above the uppermost saturated groundwater stratum and by placing concrete grout, cement grout, or neat cement from 10 feet below the surface to the surface.*

3. If the concrete grout, cement grout, neat cement, bentonite grout or dry bentonite material is not brought to within 10 feet of the surface pursuant to paragraph (b) of subsection 2, the person responsible for plugging the borehole shall:

(a) Measure the depth of the top of the lower plug with the appropriate equipment after he has allowed sufficient time for the lower plug to set up;

(b) Continue to install concrete grout, cement grout, neat cement, bentonite grout or dry bentonite material until the top of the lower plug remains at least 50 feet above the top of the uppermost saturated groundwater stratum;

(c) Install uncontaminated fill material or one of the plugging materials described in this subsection from the top of the lower plug to within 10 feet of the surface; and

(d) Place concrete grout, cement grout or neat cement from 10 feet below the surface to the surface.

4. If the elevation of the bottom of the borehole is ~~[more than 50 feet above]~~ *higher than* the preexisting natural elevation of ~~[any]~~ *the uppermost* saturated groundwater stratum, the borehole must be plugged by:

(a) Backfilling the borehole from the bottom *of the borehole* to *within* 10 feet ~~[from]~~ *of* the surface with ~~[compacted soil which is uncontaminated;]~~ *uncontaminated soil*; and

(b) Placing ~~[any of the materials described in paragraph (b) of subsection 2]~~ *concrete grout, cement grout or neat cement* from 10 feet below the surface to the surface.

~~[5.—If bentonite grout is used to plug a borehole, it must be mixed pursuant to the specifications recommended by the manufacturer.~~

~~—6.]~~ 5. If sodium bentonite chips or pellets or uncontaminated soil are placed in the borehole, they must be placed in such a manner that a bridge does not occur. Sodium bentonite chips or pellets may not be placed in more than 100 feet of standing liquid unless the chips or pellets have been coated by the manufacturer to delay hydration.

~~[7.]~~ 6. If casing is set in a borehole, the borehole must be completed as a well pursuant to the provisions of this chapter. The borehole must be plugged pursuant to NAC 534.420, or the casing must be removed from the borehole when it is plugged. The upper portion of the borehole may be permanently cased if the annular space between the casing and the walls of the borehole is completely sealed from the bottom of the casing to the surface pursuant to NAC 534.380.

Sec. 41. NAC 534.440 is hereby amended to read as follows:

534.440 1. The request for a waiver to drill an exploratory well to determine the quality or quantity of water pursuant to NRS 534.050 in a designated basin must be submitted in writing and contain the following information:

- (a) The location by public *land* survey, county assessor's parcel number , *map of the vicinity* and plat map of the exploratory well anticipated to be drilled;
 - (b) The name, address and telephone number of the person who:
 - (1) Is collecting data from the exploratory well; and
 - (2) Will be available to answer questions concerning the well;
 - (c) The reason for requesting a waiver;
 - (d) The proposed diameter and depth of the exploratory well;
 - (e) The estimated starting and completion dates of the exploratory well, not to exceed 90 days after authority is given to drill;
 - (f) The name, address and telephone number of the person who will be responsible for plugging the well, and the name, address and telephone number of the owner of the land where the well will be located if he is not the person responsible for plugging the well; and
 - (g) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned.
2. Each waiver for an exploratory well will bear a unique number preceded by the letter "W." The notice of intent to drill submitted to the Division pursuant to NAC 534.320 and the record of work submitted to the Division pursuant to NRS 534.170 must bear this number.
3. An application to appropriate water must be on file with the Division or accompany each request for a waiver.
4. A copy of the waiver must be in the possession of the well driller at the drill site.
5. The exploratory well must be:

(a) Plugged by the well driller in the manner prescribed in NAC 534.420 within 3 days after the completion of the aquifer tests for which the well was drilled; or

(b) Completed as a well pursuant to the provisions of this chapter before the drill rig is removed from the drill site.

6. The water from the well may not be used for any purpose other than the purposes set forth in the waiver without the written approval of the State Engineer.

7. A waiver to drill an exploratory well will not be granted pursuant to this section for a well in an area in which the Division determines there is sufficient information existing concerning the aquifer for the area.

Sec. 42. NAC 534.442 is hereby amended to read as follows:

534.442 1. A request for a waiver to allow a temporary use of water from an existing well to explore for minerals or to drill a well and to use the water from the well to explore for minerals must be submitted to the State Engineer in writing and contain:

- (a) The amount of water that will be used each day;
- (b) A brief description of the manner in which the water will be put to a beneficial use;
- (c) The location of the water well by public *land* survey, county assessor's parcel number , *map of the vicinity* and plat map;
- (d) The name, address and telephone number of the person who will be responsible for plugging the well, and the name, address and telephone number of the owner of the land where the well will be located if he is not the person responsible for plugging the well;
- (e) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned;

(f) The name, address and telephone number of a person who will be available to answer questions concerning the well; and

(g) The date the project is scheduled to be completed.

2. A waiver granted for the temporary use of water from a well for the exploration of minerals will bear a unique number preceded by the letters “MM.” The notice of intent to drill submitted to the Division pursuant to NAC 534.320 and the record of work submitted to the Division pursuant to NRS 534.170 must bear this number.

3. A copy of the waiver must be in the possession of the well driller at the drill site.

4. The well must be plugged in the manner prescribed in NAC 534.420 within 3 days after the completion of the project.

5. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the State Engineer.

Sec. 43. NAC 534.444 is hereby amended to read as follows:

534.444 1. A request for a waiver to allow the temporary use of water from an existing well to explore for oil, gas or geothermal resources, or to drill a well and use the water from the well to explore for oil, gas or geothermal resources, must be submitted to the State Engineer in writing and contain:

(a) The location of the proposed water well and the oil, gas or geothermal well by public *land* survey, county assessor’s parcel number , *map of the vicinity* and plat map;

(b) The oil, gas or geothermal state or federal permit and lease number, name of the well and American Petroleum Institute number, if assigned;

(c) The amount of water that will be consumed from the well each day;

- (d) The date the project is scheduled to be completed;
- (e) The name, address and telephone number of the person responsible for plugging the well, and the name, address and telephone number of the owner of the land if he is not the person who is responsible for plugging the well;
- (f) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned; and
- (g) The name, address and telephone number of a person who will be available to answer questions concerning the well.

2. A waiver that allows the temporary use of water from a water well to explore for oil, gas or geothermal resources will bear a unique number preceded by the letters "OG." The notice of intent to drill submitted to the Division pursuant to NAC 534.320 and the record of work submitted to the Division pursuant to NRS 534.170 must bear this number.

3. A copy of the waiver must be in the possession of the well driller at the drill site.

4. The well must be plugged in the manner prescribed in NAC 534.420 within 3 days after the completion of the project.

5. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the State Engineer.

Sec. 44. NAC 534.446 is hereby amended to read as follows:

534.446 1. A request for a waiver to allow the temporary use of water from an existing well for the construction of a highway, or to drill a well and use the water from the well for the construction of a highway, must be submitted to the State Engineer in writing and contain:

- (a) The location of the proposed water well by public *land* survey, county assessor's parcel number, *map of the vicinity* and plat map;
 - (b) The project and contract number, if applicable;
 - (c) The total amount of water that will be consumed each day;
 - (d) The name, address and telephone number of the person responsible for plugging the well, and the name, address and telephone number of the owner of the land where the well will be located if he is not the person responsible for plugging the well;
 - (e) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned;
 - (f) The name, address and telephone number of a person who will be available to answer questions concerning the project; and
 - (g) The date the project is scheduled to be completed.
2. A waiver that allows the temporary use of water from a well for the construction of a highway will bear a unique number preceded by the letter "C." The notice of intent to drill submitted to the Division pursuant to NAC 534.320 and the record of work submitted to the Division pursuant to NRS 534.170 must bear this number.
3. A copy of the waiver must be in the possession of the well driller at the drill site.
4. The well must be plugged in the manner prescribed in NAC 534.420 within 3 days after the completion of the project.
5. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the State Engineer.

Sec. 45. NAC 534.448 is hereby amended to read as follows:

534.448 1. A request for a waiver to drill a well in a shallow groundwater system for removing water for the purpose of alleviating potential hazards to persons and property resulting from the rise of groundwater caused by secondary recharge must be submitted to the State Engineer in writing and contain:

(a) The location of the proposed well by public *land* survey, county assessor's parcel number, *map of the vicinity* and plat map;

(b) The project and contract number, if applicable;

(c) The total amount of water that will be consumed each day;

(d) The name, address and telephone number of the person responsible for plugging the well, and the name, address and telephone number of the owner of the land where the well will be located if he is not the person responsible for plugging the well;

(e) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned;

(f) The name, address and telephone number of a person who will be available to answer questions concerning the project; and

(g) The date the project is scheduled to be completed.

2. A waiver to drill a well in a shallow groundwater system for removing water for the purpose of alleviating potential hazards to persons and property resulting from the rise of ground water caused by secondary recharge will bear a unique number preceded by the letters "DW." The notice of intent to drill submitted to the Division pursuant to NAC 534.320 and the record of work submitted to the Division pursuant to NRS 534.170 must bear this number.

3. A copy of the waiver must be in the possession of the well driller at the drill site.

4. The well must be plugged in the manner prescribed in NAC 534.420 within 3 days after the completion of the project.

5. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the State Engineer.

Sec. 46. NAC 534.450 is hereby amended to read as follows:

534.450 1. Except as otherwise provided in subsection 2, the State Engineer may, for good cause shown, waive a requirement of the provisions of this chapter.

2. The State Engineer will not waive the requirements set forth in paragraph (c) of subsection 3 of NAC 534.360.

3. A request for a waiver of a requirement of this chapter must be made in writing and include:

(a) A brief statement of the reason for requesting the waiver and the section of the regulations to be waived;

(b) The location or proposed location of the well by public *land* survey;

(c) The name and address of the owner of the well;

(d) The street address of the location of the well or, if there is no street address, a description of the location of the proposed well, including, but not limited to, common landmarks and cross-streets near the location of the well;

(e) The county assessor's parcel number for the location of the proposed well;

(f) A description of the proposed design and a sectional drawing of the proposed well that includes the depths to the aquifers, the locations of the screens and seals and the materials that will be used;

(g) A notarized affidavit provided by the Division and signed by the owner of the land where the well will be located or his authorized agent which states that the owner of the land will be responsible for plugging the well if it is abandoned;

(h) Any available data to categorize the hydraulic heads, water quality and permeability characteristics of the aquifer;

(i) A monitoring plan; and

(j) Any other information required pursuant to the provisions of this chapter.

4. After reviewing the request, the State Engineer will issue a written notice of his decision to the owner of the well.

5. Each waiver will bear a unique number preceded by the letter "R." The notice of intent to drill submitted to the Division pursuant to NAC 534.320 and the record of work submitted to the Division pursuant to NRS 534.170 must bear this number.

6. The well driller shall ensure that the well complies with the provisions of the waiver and have a copy of the waiver in his possession when he drills the well.

7. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the State Engineer.

Sec. 47. Section 4 of this regulation is hereby amended to read as follows:

Sec. 4. 1. A well driller may renew his well-drilling license by submitting a renewal application to the Division. The renewal application must:

(a) Be completed and signed by the well driller on a form provided by the Division;

(b) Be accompanied by the renewal fee prescribed in NRS 534.140; and

(c) Except as otherwise provided in paragraph (b) of subsection 5 of section 7 of this regulation and subsection 4 of NAC 534.293, include documentation satisfactory to the Division that the applicant has completed ~~four~~ *eight* credit units of continuing education within the previous year beginning July 1 and ending June 30.

2. If the State Engineer has notified a well driller during the previous year that the well driller has violated a provision of this chapter or chapter 534 of NRS related to welding involving work that does not comply with the construction standards for wells, the well driller must obtain a certificate as a certified welder from the American Welding Society or another similar organization approved by the Division and include the certificate with his application for renewal of his license.

Sec. 48. 1. This section and sections 1 to 46, inclusive, of this regulation become effective on the date on which the regulation is filed by the Legislative Counsel with the Secretary of State.

2. Section 4 of this regulation expires by limitation on June 30, 2008.

3. Section 47 of this regulation becomes effective on July 1, 2008.